

ABSTRACT

A cleaning system for cleaning an operator head of a hair removing apparatus such as a dry shaver. The system includes a cleaning device having a housing configured to hold the shaver upside down to place the operator head in a basin for cleaning the same with a liquid supplied from a tank. The apparatus incorporates an externally controllable electric circuit for driving the operator head in accordance with an external electric signal generated by a controller within the device. The device's housing has a signal transmitting means for transmitting the electric signal, while the apparatus has a signal receiving means which comes into electrical interconnection with the signal transmitting means. The signal receiving means is disposed intermediate the height of the apparatus such that the electrical interconnection can be made within the height of the apparatus, requiring no extra height dimension to the system for the electrical interconnection.

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
12 August 2004 (12.08.2004)

PCT

(10) International Publication Number
WO 2004/066780 A1

(51) International Patent Classification⁷: A45D 27/46,
B26B 19/38

(21) International Application Number:
PCT/JP2004/000382

(22) International Filing Date: 19 January 2004 (19.01.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data: 21 July 03
2003-012812 21 January 2003 (21.01.2003) JP

(71) Applicant (for all designated States except US): MAT-
SUSHITA ELECTRIC WORKS, LTD. [JP/JP]; 1048,
Oaza-Kadoma, Kadoma-shi, Osaka 5718686 (JP).

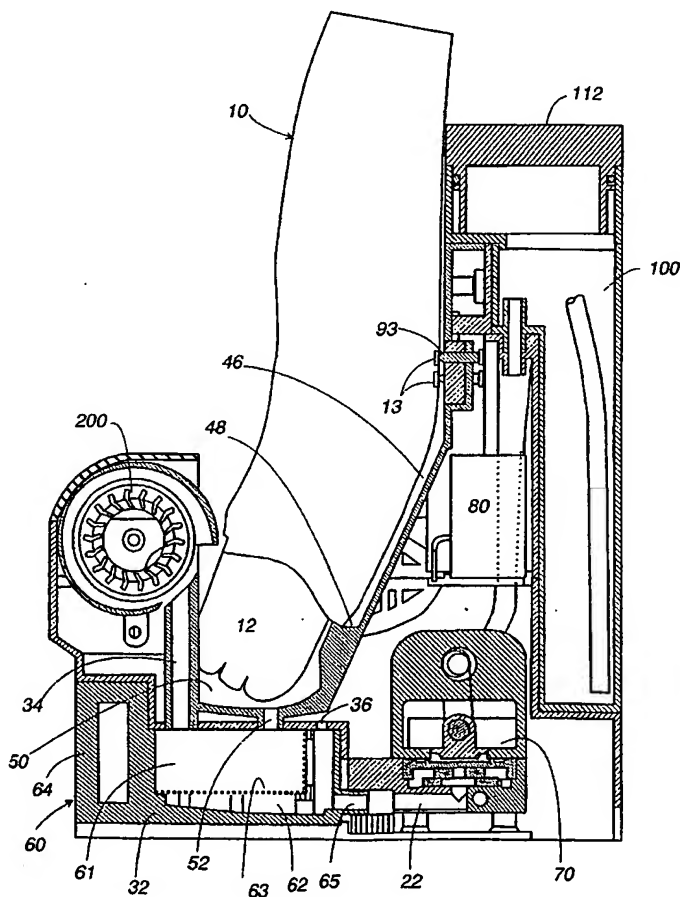
(72) Inventors; and

(75) Inventors/Applicants (for US only): SAITO, Atsuhiko

[JP/JP]; c/o Matsushita Electric Works, Ltd., 1048,
Oaza-Kadoma, Kadoma-shi, Osaka 5718686 (JP). ~~YAMASHITA~~, Mikihiro [JP/JP]; c/o Matsushita Electric
Works, Ltd., 1048, Oaza-Kadoma, Kadoma-shi, Os-
aka 5718686 (JP). ~~IWASAKI~~, Jyuzaemon [JP/JP]; c/o
Matsushita Electric Works, Ltd., 1048, Oaza-Kadoma,
Kadoma-shi, Osaka 5718686 (JP). ~~KAMEOKA~~, Hi-
royuki [JP/JP]; c/o Matsushita Electric Works, Ltd., 1048,
Oaza-Kadoma, Kadoma-shi, Osaka 5718686 (JP). ~~IBUKI~~,
Yasuo [JP/JP]; c/o Matsushita Electric Works, Ltd.,
1048, Oaza-Kadoma, Kadoma-shi, Osaka 5718686 (JP).
~~TANIGUCHI~~, Fumio [JP/JP]; c/o Matsushita Electric
Works, Ltd., 1048, Oaza-Kadoma, Kadoma-shi, Osaka
5718686 (JP). ~~YANAGI~~, Kotaro [JP/JP]; c/o Matsushita
Electric Works, Ltd., 1048, Oaza-Kadoma, Kadoma-shi,
Osaka 5718686 (JP). ~~SHIGETA~~, Hiroshi [JP/JP]; c/o
Matsushita Electric Works, Ltd., 1048, Oaza-Kadoma,
Kadoma-shi, Osaka 5718686 (JP).

[Continued on next page]

(54) Title: CLEANING SYSTEM OF A HAIR REMOVING APPARATUS



(57) Abstract: A cleaning system for cleaning an operator head of a hair removing apparatus such as a dry shaver (1a). The system includes a cleaning device having a housing (20) configured to hold the shaver upside down to place the operator head (92) in a basin (50) for cleaning the same with a liquid supplied from a tank (100). The apparatus incorporates an externally controllable electric circuit (14) for driving the operator head in accordance with an external electric signal generated by a controller (92) within the device. The device's housing has a signal transmitting means (91) for transmitting the electric signal, while the apparatus has a signal receiving means (13) which comes into electrical interconnection with the signal receiving means which comes into electrical interconnection with the signal transmitting means. The signal receiving means is disposed intermediate the height of the apparatus such that the electrical interconnection can be made within the height of the apparatus, requiring no extra height dimension to the system for the electrical interconnection.



(74) Agents: NISHIKAWA, Yoshikiyo et al.; c/o Hokuto Patent Attorneys Office, Umeda-Daiichiseimei Bldg. 5th Floor, 12-17, Umeda 1-chome, Kita-ku, Osaka-shi, Osaka 530-0001 (JP).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.